From secondary to higher education in Flanders: individual, school and regional impact on the transition probabilities

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In this paper we investigate the transition from secondary school to higher education in Flanders, more specifically the transition of students from technical and vocational education. We used merged administrative databases from the Flemish Department of Education in order to construct a longitudinal dataset, enabling to track individual students from secondary to higher education. We obtained data from the entire population of school leavers from ten study fields in technical and vocational secondary education (n=9991). The data include individual demographic student characteristics, detailed individual enrolment information in secondary education and higher education for four school years, a number of secondary school characteristics as well as regional socioeconomic indicators. These data allow us explain differences in transition probabilities to a 7th year vocational training, college or university and to quantify the impact of the various explanatory variables. Results from logistic regression models indicate that a number of individual pupil characteristics, as well as school level characteristics are significant covariates in explaining transition probabilities to post-secondary education. In addition, the estimation results also show that specific secondary education study fields have a significant impact on the transition rate to higher education.

Keywords: Transition from secondary to higher education, logistic regression.

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1 Introduction

Mainstream secondary education in Flanders (i.e. the Dutch speaking part of Belgium) is divided into four major education forms : general secondary education (GEN), technical secondary education (TEC), vocational secondary education (VOC) and secondary arts education (ART). The focus of this paper is on technical and vocational education. Technical education focuses on general and technical-theoretical subjects. After finishing technical education, students may either continue their educational career to higher education (college or university) or they can go to the labour market and exercise a profession. Approximately 30% of all secondary school students attend technical education. Vocational education is more practice-oriented and prepares pupils for a specific occupation. In general, these students are not allowed to higher education. However, they can enrol in an additional 7th year, which in turn allows them to higher education. Approximately 25% of all secondary students are enrolled in vocational education (Department of Education and Training 2008).

Despite the distinction between technical (more oriented towards higher education) and vocational education (more labour market oriented) a number of similar study fields coexist both in the technical and the vocational form. A first aim of this paper is to investigate whether students from similar study fields in technical and vocational education do have a different transition path from secondary to tertiary education. In addition we would like to quantify the impact of a number of student, school and regional characteristics on the probability of continuing their educational career after mainstream secondary education.

Since the seminal work of Mare in the 1980s a large number of studies found that the socioeconomic background of pupils has a significant impact on educational transitions (Mare 1980; Mare 1981; Shavit and Blossfeld 1993). Researchers continue to focus on the determinants of the transitions in the educational system and also a number of more recent studies investigated various aspects of transitions after secondary school.

In general four main categories of determinants can be distinguished : individual student characteristics (including ability), socio-economic background characteristics, secondary school characteristics and regional characteristics. Individual characteristics such gender, ethnic background, nationality, school performance (e.g. grade retention, repeated school absence) and self-reported health status are found to have a significant impact on the probability to continue education beyond high school (Ayalon and Yogev 2005; Haas and Fosse 2008; Tieben and

Wolbers 2010; Tieben and Wolbers 2010; Benito and Alegre 2012). In addition, socio-economic background characteristics (e.g. education level of parents, income, family composition) also have a significant impact on transition probabilities (Lucas 2001; Van de Werfhorst, De Graaf et al. 2001; Van de Werfhorst, Sullivan et al. 2003; Ayalon and Yogev 2005; Haas and Fosse 2008; Tieben and Wolbers 2010; Tieben and Wolbers 2010). Furthermore, some studies investigate the impact of school composition and school characteristics on transition to higher education (Benito and Alegre 2012). Some studies find that education form also explains differences in the transition from secondary education (Tieben and Wolbers 2010; Tieben and Wolbers 2010). Finally, Ayalon and Yogev (2005) find that regional characteristics may also contribute to explain the variance in transition paths from secondary to higher education.

In the empirical part of this paper data from existing administrative databases were used. The student databases from the Flemish Department of Education contain student as well as school characteristics. We were able to pair the secondary education database with the higher education database. By (anonymously) linking both databases we were able to reconstruct individual paths from secondary education to an additional year of secondary education and to higher education. The sources of all data, tables and empirical analyses presented in this paper are these combined databases of the Flemish Department of Education. In section two a brief description of the data and the methodology for the empirical part is presented and in section three the results of the empirical logistic regressions will be reported. Section four concludes this paper.

2 Data and methodology

2.1 Data

In order to estimate similarities or differences between technical and vocation education in the transition from school to work, a number of similar study fields was selected. First, experts from the Department of Education and from the school inspection authority investigated for every study field in technical education whether an equivalent (regarding teaching content) study field existed in vocational education. Second, in order to obtain meaningful results, from this list of equivalent study fields we only selected study fields that were supplied in a sufficient number of schools and with a sufficient number of students. This resulted in 10 study fields, of which the entire population of 9991 students enrolled in the 6th year (i.e. the last year of secondary education) was included in this research. The majority was enrolled in vocational education (6311 pupils) while technical education accounted for 3680 students (more details can be found in Table 1).

[TABLE 1 ABOUT HERE]

The databases of the Department of Education (database secondary education and database tertiary education) were linked using a unique identifier associated with every student. The Department of Education data include information on students characteristics (e.g. gender, nationality, year of birth, grade retention, problematic non-attendance, study results), detailed individual enrolment information in secondary education (SE) and higher education (HE) for four school years (starting from school year 2003-2004 and ending in school year 2006-2007), as well as a number of school characteristics (e.g. number of students, type of educational network, number of study fields, city).

2.2 Profile of students and study fields

We will first describe some major differences between the characteristics of students in vocational and technical education. Vocational education has more non-Belgian students (6.9% in vocational versus 2.4% in technical education), more students with problematic non-attendance (approximately 0.9% in vocational versus 0.3% in technical education) and a higher share of students with grade retention (57% in vocational versus 45% in technical education). Moreover, the grade retention is more severe in vocational education.

[TABLE 2 ABOUT HERE]

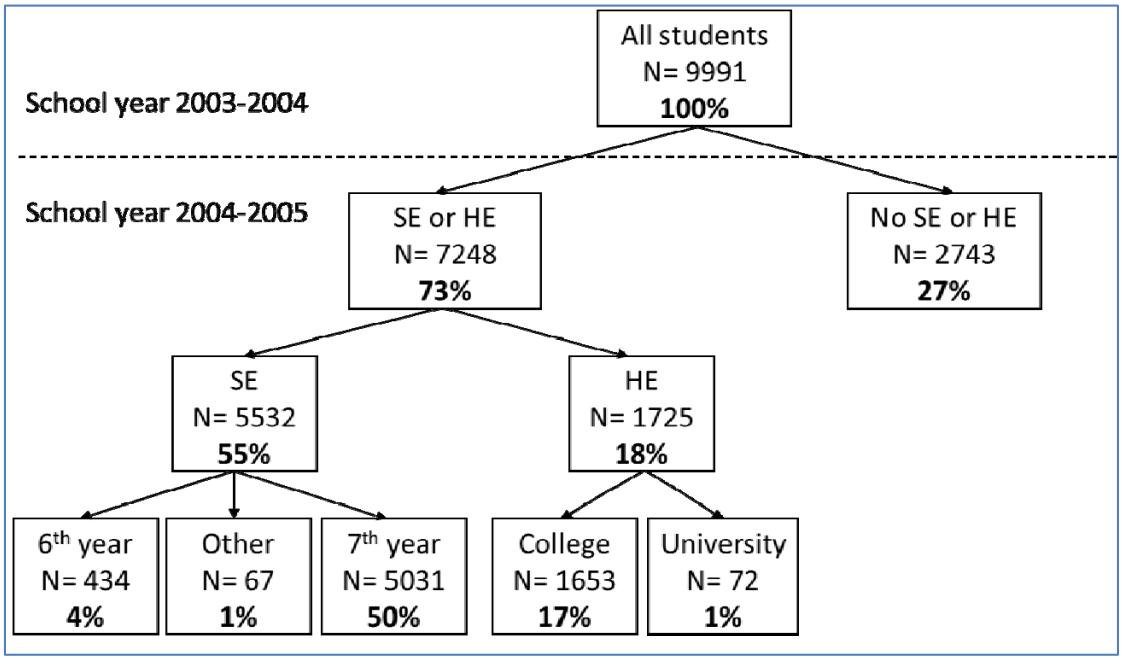
These differences persist when we compare similar individual study fields in technical and vocation education. Regarding the different study fields, we can distinguish typical male study fields (car engineering, woodwork, construction and mechanics) from a typical female study field such as fashion. The other study fields (office, agriculture, horticulture, bakery & pastry and hotel & catering) have a more balanced gender distribution. In addition, we observe the largest grade retention in car engineering. More detailed descriptive statistics are presented in Table 2.

2.3 Educational career after last year of secondary education

After the school year 2003-2004, a variety of options emerges for the pupils : from continuing (secondary or higher) education to a transition to the labour market. Figure 1 depicts the possibilities in the school year 2004-2005. From the 9991 students we were originally following, 7248 (73%) are still studying during the next school year. The majority (55% of the original population) of them can be found in secondary education (SE), mainly in a 7th year (specialisation year). A smaller share (18%) is enrolled in higher education (HE), predominantly in

university colleges. About 27% of the original population does not study anymore in school year 2004-2005. The majority of them will make a transition to the labour market : they may find a job immediately after leaving school or they may be unemployed for some period (other possibilities may be emigration abroad, admission in a psychiatric institution, internment, etc.).

Figure 1 Career after last year of secondary education : positions in school year 2004-2005



Source : Combined database Department of Education

Approximately 78% of the original population of 6311 vocational students continue their educational career in 2004-2005, compared to approximately 64 % of the technical students. Vocational students predominantly choose a 7th year of secondary education while students from technical education continue their educational career in a higher education institution (mainly college). Table 3 indicates that approximately 75% of all vocational students enrol in a 7th year, compared with almost 14% of all technical students. Transition to university colleges is more common for technical students (51%) than for vocational students (14%). The share of students enrolling in a university is relatively small, especially for vocational students.

[TABLE 3 ABOUT HERE]

Table 3 also provides more detailed transition information for the separate study fields. It is clear that students originating from specific study fields (e.g. office) have a higher probability to enrol in continued education than students originating from other study fields (e.g. construction).

Table 2 already showed that student profiles strongly differ among study fields. It is therefore necessary to control for these characteristics in order to determine to what extent different transition probabilities of study fields and education forms can be explained by individual, school and regional characteristics.

2.4 Methodology

Methodologically, the most frequently used techniques to investigate the impact of student, family and school characteristics on transition probabilities are the estimation of probit or logit models (Breen and Jonsson 2000; Lucas 2001; Ayalon and Yogev 2005; Benito and Alegre 2012).

3 Empirical analysis

Since only a small number of the students in our sample enrols in a university (see Figure 1 and Table 3), this category was excluded from the logistic regressions, i.e. only transitions from the 6th year of secondary education to a 7th year of secondary education and to university college are considered.

The explanatory variables in the regression model comprise individual student characteristics, the secondary school study field and education form in which the students were enrolled, school characteristics and regional variables. Individual characteristics include gender, nationality, problematic non-attendances and grade retention. In addition education form (technical or vocational education) and the ten different study fields are included as dummy variables. Explanatory school characteristics are : the share of equal opportunities students, school size, the share of technical and vocational study fields in the mix of study fields supplied by the school, the number of different study fields supplied by the school and the educational network. Finally, regional characteristics are included : the Dexia-typology classifies municipalities and cities into a number of categories, based on their socio-economic profile (Dexia 2007). These categories were included in order to capture regional differences in economic strength and performance of local labour markets.

The results of the first logistic regression (the decision to enrol in a 7th year) are presented in Table 4. The parameter estimates, their standard errors and the significance levels can be found in the columns labelled “B”, “SE” and “Sig.”, respectively. The marginal effects (at sample mean) are reported in the last column.

[TABLE 4 ABOUT HERE]

The results show that the probability of transition to a 7th year is not influenced by gender or nationality. However, there is a strong negative effect of grade retention (one additional year of grade retention reduces the transition probability with 8 percentage points) and problematic non-attendance (reduction of 42 percentage points) on the probability of continuing education. Students from technical education have a lower probability of enrolment in a 7th year. This finding is consistent with the fact that vocational students can only gain a diploma of secondary education (which is a prerequisite for enrolment in higher education) after successfully completing a 7th year. In addition, the specific study field also has a significant impact on transition probabilities. In general, the estimated marginal effects confirm the descriptive statistics that were presented in Table 3. School size and the share of vocational study fields have a significant positive impact on the transition probability while the total number of supplied study fields has a negative impact. Students originating from GO! and municipal schools have lower transition probabilities compared with students from privately run schools. Finally, some of the regional typology indicators also have a significant impact on the probability of enrolment in a 7th year.

The estimates in Table 4 indicate average differences between technical and vocational education. Since differences within a specific study field are not captured by this approach, separate logistic regressions for the five largest generic study fields (car engineering, office, woodwork, mechanics and hotel and catering) were run. The marginal effects of education form (technical versus vocational) are presented in Table 5[1]. These separate estimates can also be used as robustness checks for the regression in Table 4 : the main findings regarding individual characteristics (e.g. no gender effect, the strong negative impact of grade retention and problematic non-attendance) are confirmed in these separate regressions. The impact of school and regional characteristics is less pronounced in the separate regressions.

The results presented in Table 5 show that the estimated marginal effects of technical education (compared to vocational) range from -28 percentage points for hotel and catering to -64 percentage points for office. Comparing these estimated differences in transition probabilities (i.e. controlling for individual, school and regional characteristics) with observed differences in transition probabilities (see Table 3) indicate that the included explanatory variables cannot

[1] The full model included the same individual, school and regional variables as presented in Table 4. In Table 5 only the estimated marginal effect of education form is reported. Tables with the full estimation results are available and can be requested from the author.

completely explain the observed differences. For all study fields it holds that the estimated difference is smaller than the observed difference.

[TABLE 5 ABOUT HERE]

Table 6 reports the results of a logistic regression explaining the probability of transition from secondary education to higher education, more specifically the enrolment in university colleges. Similar to the results for the probability of enrolment in a 7th year, no significant gender effect was found. However, nationality does have a significant impact : students with Dutch nationality have a transition probability that is 13 percentage points lower than Belgian pupils with the same characteristics. Dutch students might enrol in Dutch higher education institutes or enter the Dutch labour market. On the other hand, students with Moroccan nationality enrol more in university colleges than similar Belgian students. Grade retention and problematic non-attendances have a negative effect on transition probabilities.

[TABLE 6 ABOUT HERE]

Relatively more technical than vocational students enrol in university colleges (a difference of more than 19 percentage points). Regarding study field, the transition probability from office, fashion, agriculture, horticulture and hotel and catering is significantly higher than from the reference category cars. Other study fields do not significantly differ from cars. Students that have completed a 7th year (predominantly vocational students) have a 5 percentage points higher transition probability than those who did not. Contrary to the enrolment probabilities in a 7th year, school characteristics, educational network (except for GO! (regional government education)) and regional dummies do not have a significant impact on the transition to university colleges.

Since there are large transition differences between the distinct study fields, separate logistic regressions for the five largest generic study fields (car engineering, office, woodwork, mechanics and hotel and catering) were run (similar to the approach followed in the section regarding transition to a 7th year). The marginal effects of education form (technical versus vocational) are presented in Table 7[2].

[2] The full model included the same individual, school and regional variables as presented in Table 6. In Table 7 only the estimated marginal effect of education form is reported. Tables with the full estimation results are available and can be requested from the author.

These separate regressions confirm that there is no gender effect and that there is a strong negative impact of grade retention and problematic non-attendance on the probability of enrolment in higher education.

[TABLE 7 ABOUT HERE]

The results show that technical students (regardless study field) always have a higher transition probability to university colleges than vocational students. The estimated differences (ranging from 8 percentage points for woodwork to 38 percentage points for office) are always smaller than the observed differences.

Comparing these estimated differences in transition probabilities (i.e. controlling for individual, school and regional characteristics) with observed differences in transition probabilities (see Table 3) indicate that the included explanatory variables cannot completely explain the observed differences. For all study fields it holds that the estimated difference is smaller than the observed difference. Non-included variables (such as ability, preferences, family background, etc.) probably account for the difference in observed and estimated difference between technical and vocational study fields.

4 Discussion and concluding comments

By merging administrative databases from the Flemish Department of Education, more specifically data regarding secondary and higher education, we were able to construct a longitudinal dataset, enabling to track individual students from secondary to higher education. We obtained data from the entire population of school leavers from ten study fields in technical and vocational secondary education (n=9991).

In this paper we estimated the impact of individual student characteristics, secondary school education form and study field, school characteristics and regional indicators on the transition probability from secondary education to a 7th year and to enrolment in university colleges. A limitation of this study is that the databases did not contain data on socio-economic background of the students.

The results of the logistic regressions indicate that individual characteristics such as grade retention and problematic non-attendances have a significant negative impact on transition probabilities. A gender effect could not be found. Evidence on the impact of nationality, school characteristics, educational network and regional dummies is mixed. The educational form (technical versus vocational secondary education) is always significant and also between different study fields significant differences were found.

Separate regressions for individual study fields indicate that the observed differences in enrolment probabilities between technical and vocational are not completely explained by the (variables included in) the model.

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Table 1 Selected study fields (last year secondary school, school year 2003-2004)

	Technical education		Vocational education	
Generic name of selected study field	Schools (N.)	Students (N.)	Schools (N.)	Students (N.)
Car engineering (CARS)	35	353	64	652
Construction (CONS)	13	112	32	298
Office (OFFI)	116	1373	158	2475
Woodwork (WOOD)	43	376	123	1123
Fashion (FASH)	17	124	57	244
Agriculture (AGRI)	12	71	12	87
Horticulture (HORT)	20	204	20	243
Mechanics (MECH)	78	681	64	458
Bakery and pastry (BAKE)	4	41	15	187
Hotel and catering (HOCA)	23	345	27	544
Total number of students		**3680**		**6311**

Source : Combined database Department of Education

Table 2 Student characteristics for selected study fields in vocational and technical secondary education, 6th year (2003-2004)

	Vocational study fields											Technical study fields										
	Cars	Cons	Offi	Wood	Fash	Agri	Hort	Mech	Bake	Hoca	**Total**	Cars	Cons	Offi	Wood	Fash	Agri	Hort	Mech	Bake	Hoca	**Total**
N	652	298	2475	1123	244	87	243	458	187	544	**6311**	353	112	1373	376	124	71	204	681	41	345	**3680**
Gender																						
% male	98,5	100	38,5	98,5	0,8	88,5	87,2	98,5	81,3	64,7	**67,2**	99,4	100	30,5	98,1	1,6	83,1	88,2	98,8	80,5	66,4	**66,0**
% female	1,5		61,5	1,5	99,2	11,5	12,8	1,5	18,7	35,3	**32,8**	0,6		69,5	1,9	98,4	16,9	11,8	1,2	19,5	33,6	**34,0**
Nationality																						
% Belg	91,1	96,0	92,6	94,2	89,8	100	99,6	88,2	96,3	94,9	**93,1**	98,6	99,1	97,3	98,1	94,4	93,0	99,0	98,4	100	95,9	**97,6**
% Dutch.	2,8	0,3	0,6	3,1			0,4	5,7	2,1	3,5	**1,9**		0,9	0,4	1,6	2,4	7,0	1,0	0,9		3,5	**1,1**
% Moroc.	2,1	0,3	2,7	1,1	5,3			3,5	1,6	0,4	**2,0**	0,3		1,2		0,8			0,4			**0,6**
% Turk.	1,2	1,0	1,2		2,5			1,1		0,2	**0,8**			0,1								**0,1**
% Other	2,8	2,3	3,0	1,6	2,5			1,5		1,1	**2,2**	1,1		0,9	0,3	2,4			0,3		0,6	**0,7**
Problematic non-attendance 2003-2004																						
% yes	1,7	0,7	0,7	0,8	1,6			1,5	1,1	0,9	**0,9**			0,6				0,5			0,3	**0,3**
Grade retention																						
- 1 year	0,2		0,0							0,2	**0,0**			0,3				0,5	0,1			**0,2**
% 0	38,5	45,6	41,1	44,9	47,5	74,7	45,3	40,2	44,9	40,4	**42,6**	43,3	47,3	56,2	58,8	73,4	71,8	62,7	50,4	56,1	55,7	**55,1**
% 1	39,0	36,9	37,8	41,9	41,8	21,8	42,0	38,6	39,6	39,9	**39,0**	36,3	41,1	30,4	32,2	22,6	21,1	27,5	38,0	31,7	29,9	**32,3**
% 2	16,7	15,1	16,1	11,8	9,0	3,4	11,5	16,4	11,2	13,4	**14,4**	14,7	9,8	10,0	8,5	4,0	7,0	7,4	10,1	12,2	10,4	**10,0**
% 3	3,7	2,0	4,0	1,4	0,8		0,4	4,6	3,2	5,3	**3,2**	4,2	0,9	2,3	0,5			1,5	1,3		3,2	**2,0**
% 4	1,8		0,7	0,1	0,4		0,8	0,2	1,1	0,6	**0,6**	0,8	0,9	0,8							0,6	**0,5**
% 5	0,2	0,3	0,2							0,2	**0,1**	0,6		0,1							0,3	**0,1**
% 6			0,0								**0,0**											**0,0**
% 7			0,0								**0,0**							0,5				**0,2**
% 8					0,4						**0,0**											
mean	1,49	1,38	1,46	1,27	1,28	1,14	1,27	1,44	1,38	1,45	**1,41**	1,50	1,27	1,39	1,23	1,15	1,25	1,36	1,26	1,28	1,44	**1,35**

Source : Combined database Department of Education

Table 3 Share of students still studying after 6th year secondary education

	Vocational			Technical		
	% 7th year	% university college	% university	% 7th year	% university college	% university
CARS	70,1	4,6	0,2	18,4	27,8	0,6
CONS	63,8	1,3	0,0	8,0	33,0	0,0
OFFI	85,4	28,4	1,1	5,2	76,0	4,8
WOOD	68,0	4,1	0,4	11,4	32,4	0,5
FASH	67,2	7,4	0,0	21,0	59,7	1,6
AGRI	71,3	6,9	0,0	9,9	50,7	1,4
HORT	79,4	11,1	0,0	8,8	58,8	1,5
MECH	72,5	4,8	0,2	24,4	29,8	0,4
BAKE	58,8	2,1	1,1	56,1	26,8	0,0
HOCA	68,9	7,2	0,2	23,2	41,7	2,6
All study fields	**75,4**	**14,3**	**0,6**	**13,8**	**51,3**	**2,4**

Source : Combined database Department of Education

Table 4 Logistic regression determinants of enrolment in 7th year

	B	S.E.	Sig.	Marg. effect
Gender (ref=female)	-0.015	0.075	0.846	-0.004
Nationality (ref=Belgian)	**		0.044	
Other	0.219	0.199	0.272	0.054
Dutch	-0.349*	0.205	0.088	-0.087
Moroccan	0.377*	0.223	0.092	0.093
Turkish	-0.484	0.300	0.107	-0.119
Grade retention	-0.311***	0.032	0.000	-0.078
Problematic non-attendance (ref =no)	-2.271***	0.326	0.000	-0.416
Education form (ref=VOC)	-1.650***	0.032	0.000	-0.412
Study field secondary education (ref=CARS)	***		0.000	
CONS	-0.605***	0.143	0.000	-0.148
OFFI	0.333***	0.109	0.002	0.083
WOOD	-0.315***	0.102	0.002	-0.079
FASH	-0.181	0.174	0.298	-0.045
AGRI	-0.376*	0.226	0.096	-0.093
HORT	-0.010	0.155	0.948	-0.003
MECH	0.587***	0.115	0.000	0.143
BAKE	-0.433**	0.181	0.017	-0.107
HOCA	-0.056	0.128	0.661	-0.014
% equal opportunities pupils	-0.012	0.009	0.210	-0.003
Total number of students	0.000***	0.000	0.001	0.000
% TEC study fields	-0.001	0.002	0.620	0.000
% VOC study fields	0.006***	0.002	0.005	0.002
Number of different study fields in school	-0.008***	0.003	0.006	-0.002
Educational network (ref=Privately run schools)	***		0.002	
Other	-0.372	0.437	0.395	-0.069
GO! (regional government education)	-0.275***	0.091	0.002	-0.092
Municipal education	-0.332***	0.119	0.005	-0.083
Provincial education	0.122	0.109	0.264	0.030
Dexia typology (ref=Regional capitals)	***		0.000	
Residential municipalities	0.003	0.096	0.977	0.001
Rural municipalities	-0.227*	0.117	0.052	-0.057
Municipal. with concentration of econ. activ.	-0.291***	0.088	0.001	-0.073
Urbanised municipalities or conurbations	-0.410***	0.093	0.000	-0.102
Tourist municipalities	0.078	0.197	0.692	0.019
Largely urbanised central municipalities	0.382	0.255	0.135	0.094
Constant	6.320***	0.238	0.000	

N=9991 ; df=32 ; Chi²=4231.042 ; -2LL=9589.462

*: p < 0.10 **: p < 0.05 ***: p < 0.01

Table 5 Impact of education form on the probability of enrolment in 7th year

	N	Estimated Marg.effect TEC	Probability of enrolment in 7th year		
			Observed VOC	Observed TEC	TEC-VOC
Car engineering	1005	-33.8***	70.1%	18.4%	-51.70%
Office	3848	-64.1***	85.4%	5.2%	-80.20%
Woodwork	1499	-37.0***	68.0%	11.4%	-56.60%
Mechanics	1139	-37.8***	72.5%	24.4%	-48.10%
Hotel and catering	889	-28.0***	68.9%	23.2%	-45.70%

***: $p < 0.01$

Table 6 Logistic regression determinants of enrolment in university college

	B	S.E.	Sig.	Marg. effect
Gender (ref=female)	0.056	0.070	0.422	0.009
Nationality (ref=Belgian)	***		0.000	
Other	0.149	0.227	0.512	0.025
Dutch	-1.093***	0.335	0.001	-0.126
Moroccan	0.853***	0.213	0.000	0.170
Turkish	-0.173	0.415	0.677	-0.027
Grade retention	-0.221***	0.035	0.000	-0.036
Problematic non-attendance (ref =no)	-2.101***	0.651	0.001	-0.175
Education form (ref=VOC)	1.198***	0.041	0.000	0.194
Study field secondary education (ref=CARS)	***		0.000	
CONS	-0.117	0.205	0.567	-0.018
OFFI	2.141***	0.129	0.000	0.387
WOOD	0.091	0.136	0.502	0.015
FASH	0.888***	0.188	0.000	0.177
AGRI	0.762***	0.229	0.001	0.149
HORT	1.132***	0.163	0.000	0.234
MECH	-0.011	0.131	0.931	-0.002
BAKE	-0.389	0.311	0.211	-0.056
HOCA	0.600***	0.149	0.000	0.111
7th year completed	0.320***	0.076	0.000	0.052
% equal opportunities pupils	-0.009	0.010	0.384	-0.001
Total number of students	0.000	0.000	0.163	0.000
% TEC study fields	0.002	0.002	0.232	0.000
% VOC study fields	0.000	0.002	0.939	0.000
Number of different study fields in school	-0.004	0.003	0.245	-0.001
Educational network (ref=Privately run schools)	**		0.045	
Other	-0.508	0.511	0.321	-0.031
GO! (regional government education)	-0.198*	0.102	0.054	-0.070
Municipal education	0.164	0.130	0.207	0.028
Provincial education	0.154	0.112	0.172	0.026
Dexia typology (ref=Regional capitals)			0.633	
Residential municipalities	0.126	0.096	0.190	0.021
Rural municipalities	0.109	0.123	0.375	0.018
Municipal. with concentration of econ. activ.	0.057	0.092	0.536	0.009
Urbanised municipalities or conurbations	-0.079	0.100	0.433	-0.013
Tourist municipalities	-0.075	0.224	0.738	-0.012
Largely urbanised central municipalities	0.180	0.243	0.458	0.031
Constant	-6.949***	0.304	0.000	

N=9991 Df= 33 ; Chi² = 3074,746 ; -2LL = 8757,593

*: p < 0.10 **: p < 0.05 ***: p < 0.01

Table 7 Impact of education form on the probability of enrolment in university college

	N	Estimated Marg.effect TEC	Probability of enrolment in university college		
			Observed VOC	Observed TEC	TEC-VOC
Car engineering	1005	9,3***	4,6%	27,8%	23.20%
Office	3848	38,0***	28,4%	76,0%	47.60%
Woodwork	1499	8,3***	4,1%	32,4%	28.30%
Mechanics	1139	13,3***	4,8%	29,8%	25.00%
Hotel and catering	889	13,1***	7,2%	41,7%	34.50%

***: $p < 0.01$